

PURCHASE DESCRIPTION

ANALYZER, NETWORK

AN2NV-D

1.0 GENERAL This procurement requires a scalar network analyzer.

2.0 CLASSIFICATION The equipment shall meet the requirements of MIL-T-28800() ,Type III, Class 5, Style E, and Color R for Navy shipboard, submarine and shore applications with the following modifications and exceptions:

a. The Electromagnetic Interference requirements (EMI) of MIL-T-28800() are limited to

CE01 (relaxed 20 dB), CE03 (broadband limits relaxed 20 dB below 200 kHz), CS01,

CS02 (0.05 to 100 MHz), CS06, RE01 (0.03 to 15 kHz), RE02 (14 kHz to 1 GHz) and RS03.

b. The digital readout shall be designed for use at arms length.

3.0 MEASUREMENT CAPABILITIES The equipment shall be capable of absolute power and power ratio measurements within the minimum specifications identified below. A display of VSWR or a chart for converting return loss and reflection coefficient to VSWR shall be provided.

3.1 Frequency Range 100 MHz to 40 GHz

3.2 Dynamic Range -50 dBm to 10 dBm

3.3 Input Channels Channel A, channel B, and a reference channel. Ratio measurement capabilities shall be provided for channel A to reference and channel B to reference.

3.4 Resolution Selectable resolutions such as 0.2, 0.5, 1, 5, and 10 dB per division shall be provided.

3.5 Display Offset ± 59 dB for each channel. Resolution: 0.1 dB.

3.6 Frequency Response ± 1 dB or less

3.7 Accuracy ± 1.1 dB, excluding mismatch and frequency response errors, for inputs that are 10 to 50 dB from the reference.

3.8 Impedance 50 ohms nominal

3.9 VSWR 1.7 maximum

3.10 Display The equipment shall contain a rectangular graphic display of no less than 76 mm (3 in) x 102 mm (4 in). The horizontal and vertical centerlines shall be marked in 0.2 division sub-increments and one division cardinal increments. In lieu of division increments the equipment may be provided with positionable markers that provide a readout of frequency and amplitude.

3.11 External Input The equipment shall be provided with an external sweep input compatible with a 0 to 10V ramp signal such that the ramp will cause a full-screen horizontal deflection of the CRT beam.

4.0 GENERAL REQUIREMENTS

4.1 Power Source MIL-T-28800() nominal power source requirements are invoked. Maximum power consumption: 125W.

4.2 Lithium Batteries Per MIL-T-28800(), lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.

4.3 Weight \leq 30 kg (66 lb)

4.4 Accessories

- 4.4.1 Shielded open
- 4.4.2 Shielded short
- 4.4.3 50 ohm termination
- 4.4.4 10 dB pad
- 4.4.5 50 ohm power splitter
- 4.4.6 Detectors (2 ea)
- 4.4.7 Return loss bridge
 - 4.4.7.1 Directivity: \geq 35 dB
 - 4.4.7.2 Insertion Loss: \leq 2.0 dB
 - 4.4.7.3 Connector: "K"
- 4.4.8 Adapter: Coax to Ka Band (26-40 GHz)

4.5 Connectors Connectors shall allow 100 MHz to 40 GHz operation ("K" or APC 3.5).